

Please type a plus sign (+) inside this box → +

PTO/SB/08A (08-00)  
Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
Sheet		1	of	2	Application Number <u>10/694,474</u> Filing Date <u>27 OCTOBER 2003</u> ✓ First Named Inventor <u>Christophe Pierrat et al.</u> Group Art Unit <u>2825</u> Examiner Name <u>LINISUN J.</u> Attorney Docket Number <u>FTIS 1004-1</u>

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
<i>JS</i>	A1	5,121,256		Corle et al.	06-09-1992	
<i>JS</i>	A2	5,469,299		Nagano	11-21-1995	
<i>JS</i>	A3	5,982,558		Further et al.	11-09-1999	
<i>JS</i>	A4	6,198,576		Matsuyama	03-06-2001	
<i>JS</i>	A5	6,522,484		Schuster	02-18-2003	
	A6					
	A7					
	A8					
	A9					
	A10					
	A11					
	A12					
	A13					
	A14					
	A15					
	A16					
	A17					
	A18					
	A19					
	A20					

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	B1							
	B2							
	B3							
	B4							
	B5							
	B6							
	B7							
	B8							
	B9							
	B10							

Examiner Signature		Date Considered	2-8-05
-----------------------	--	--------------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → +

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031  
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>	
Application Number		10/694,474	
Filing Date		27 OCTOBER 2003	✓
First Named Inventor		Christophe Pierrat et al.	
Group Art Unit		2825	
Examiner Name		LINI SUN J.	
Attorney Docket Number		FTIS 1004-1	

Sheet	2	of	2
-------	---	----	---

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), data, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
JSA	C1	FRENCH, ROGER H., et al., "Fluoropolymers for 157nm Lithography: Optical Properties from VUV Absorbance and Ellipsometry Measurements," SPIE Proceedings, Microlithography 2000, 12 pages.	
	C2	FLAGELLO, DONIS G., et al., "High-numerical-aperture effects in photoresist," Applied Optics 36(34) (1 Dec 1997) 8944-8951.	
	C3	FRENCH, ROGER H., et al., "Materials Design and Development of Fluoropolymers for Use as Pellicles in 157nm Photolithography," Optical Microlithography XIV, Proceedings of SPIE vol. 4346 (2001).	
	C4	PIERRAT, CHRISTOPHE, et al., "The MEF Revisited: Low k1 Effects versus Mask Topography Effects," Optical Microlithography XVI, Proceedings of SPIE vol. 5040 (25 Feb 2003).	
	C5	CHIBA, YUJI, et al., "New generation projection optics for ArF lithography," Optical Microlithography XV, Proceedings of SPIE Vol. 4691 (2002), 679-686.	
	C6	BAEK, SO-YEON, et al., "Simulation Study of Process Latitude for Liquid Immersion Lithography," Optical Microlithography XVI, Proceedings of SPIE vol. 5040 (27 Feb 2003), 11 pages.	
	C7	PENDRY, J.B., et al., "Near-field lenses in two dimensions," J. Phys.: Condens. Matter 14 (2002) 8463-8479.	
	C8	OBER, CHRISTOPHER K., "Polymer Surfaces and Surface Analysis," Nanobiotechnology MSE 563/AEP 663 (2000), 43 pages.	
JSA	C9	HAFEMAN, SCOTT, et al., "Simulation of imaging and stray light effects in immersion lithography," Optical Microlithography XVI, Proceedings of SPIE vol. 5040 (27 Feb 2003), 13 pages.	

Examiner Signature		Date Considered	2-8-05
-----------------------	--	--------------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

† Unique citation designation number. ‡ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → +

PTO/SB/08A (08-00)  
Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.



Substitute for form 1449A/PTO			<b>Complete if Known</b>		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			Application Number	10/694,474	
			Filing Date	27 October 2003	
			First Named Inventor	Christophe Pierrat et al.	
			Group Art Unit	2825	
			Examiner Name	LIN, SUN J.	
Sheet	1	of	2	Attorney Docket Number	FTIS 1004-1

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	6,081,658		Rieger et al.	06-27-2000	
	A2					
	A3					
	A4					
	A5					
	A6					
	A7					
	A8					
	A9					
	A10					
	A11					
	A12					
	A13					
	A14					
	A15					
	A16					
	A17					
	A18					
	A19					
	A20					

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	TS
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	B1							
	B2							
	B3							
	B4							
	B5							
	B6							
	B7							
	B8							
	B9							
	B10							

Examiner Signature	Date Considered 2-8-05
--------------------	------------------------

\*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → +

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<p>Substitute for form 1449B/PTO</p> <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;">(use as many sheets as necessary)</p>		<p><b>Complete If Known</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%;">Application Number</td><td>10/694,474</td></tr><tr><td>Filing Date</td><td>27 October 2003</td></tr><tr><td>First Named Inventor</td><td>Christophe Pierrat et al.</td></tr><tr><td>Group Art Unit</td><td>2825</td></tr><tr><td>Examiner Name</td><td>LIN, SUN J.</td></tr><tr><td>Attorney Docket Number</td><td>FTIS 1004-1</td></tr></table>		Application Number	10/694,474	Filing Date	27 October 2003	First Named Inventor	Christophe Pierrat et al.	Group Art Unit	2825	Examiner Name	LIN, SUN J.	Attorney Docket Number	FTIS 1004-1
Application Number	10/694,474														
Filing Date	27 October 2003														
First Named Inventor	Christophe Pierrat et al.														
Group Art Unit	2825														
Examiner Name	LIN, SUN J.														
Attorney Docket Number	FTIS 1004-1														
Sheet	2	of	2												

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), data, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
JSA	C1	BRUNNER TIMOTHY A., et al., "Optical/Laser Microlithography VIII," SPIE, Vol. 2440, 301-312.	
J	C2	GAROFALO, J., et al., "Automatic Proximity Correction for 0.35Fm I-Line Photolithography," IEEE, Numerical Modeling of Processes and Devices for Integrated Circuits, 1994. NUPAD V., International Workshop on 5-6 Jun 1994, 92-94.	
	C3	RIEGER, MICHAEL L., et al., "Using Behavior Modelling for Proximity Correction," SPIE, 1994, 6 pages.	
	C4	STIRNIMAN, JOHN P., et al., "Fast Proximity Correction with Zone Sampling," SPIE, VOL. 2197, 294-390.	
	C5	STIRNIMAN, JOHN P., et al., "Optimizing Proximity Correction for Wafer Fabrication Processes," SPIE, Vol. 2322, Photomask Technology and Management (1994) 239-246.	
	C6	LIEBMANN, L.W. et al., "TCAD development for lithography resolution enhancement," IBM J. RES. & DEV. Vol 45, No. 5, September 2001, 651-665.	
JSA	C7	TORRES, J.A., et al., "Contrast-Based Assist Feature Optimization," Deep Submicron Technical Publication, May 2002, Mentor Graphics, 8 pages.	

Examiner Signature		Date Considered	2-8-05
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.